

Amendments to the Claims

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims

1-128. (Canceled)

129. (Currently Amended) A light emitting device comprising:

a first electrode;

~~a second electrode;~~

a hole transporting region comprising a hole transporting material adjacent to the first electrode;

a light emitting region comprising a first layer over the hole transporting region, a second layer over the first layer, and a light emitting layer sandwiched between the first layer and the second layer;

an electron transporting region over the second layer, the electron transporting region comprising an electron transporting material ~~adjacent to the second electrode;~~ and

a second electrode over the electron transporting region,

~~a light emitting region comprising a mixed layer of the hole transporting material and the electron transporting material and having a capability of transporting both holes and electrons;~~
and

~~a dopant included only in a portion of the light emitting region,~~

~~wherein the light emitting region is formed between the hole transporting region and the electron transporting region.~~

wherein the first layer, the second layer, and the light emitting layer comprise the hole transporting material and the electron transporting material, and

wherein the light emitting layer further comprises a dopant.

130. (Currently Amended) A light emitting device comprising:

an anode;

~~a cathode;~~
a hole transporting region comprising a hole transporting material adjacent to the anode;
a light emitting region comprising a first layer over the hole transporting region, a second layer over the first layer, and a light emitting layer sandwiched between the first layer and the second layer;
an electron transporting region over the second layer, the electron transporting region comprising an electron transporting material ~~adjacent to the cathode;~~ and
~~a light emitting region comprising a mixed layer of the hole transporting material and the electron transporting material and having a capability of transporting both holes and electrons;~~
~~and~~
~~—— a dopant included only in a portion of the light emitting region,~~
~~—— wherein the light emitting region is formed between the hole transporting region and the electron transporting region;~~
a cathode over the electron transporting region,
wherein the first layer, the second layer, and the light emitting layer comprise the hole transporting material and the electron transporting material, and
wherein the light emitting layer further comprises a dopant.

131. (Currently Amended) A light emitting device comprising:
~~an anode~~ a first electrode;
~~a cathode;~~
a hole transporting region comprising a hole transporting material adjacent to the ~~anode~~
first electrode;
a light emitting region comprising a first layer over the hole transporting region, a second layer over the first layer, and a light emitting layer sandwiched between the first layer and the second layer;
an electron transporting region over the second layer, the electron transporting region comprising an electron transporting material ~~adjacent to the cathode;~~ and
a second electrode over the electron transporting region,

~~a light emitting region comprising a mixed layer of the hole transporting material and the electron transporting material and having a capability of transporting both holes and electrons;~~
~~and~~

~~a dopant included only in a portion of the light emitting region;~~
~~wherein the light emitting region is formed between the hole transporting region~~
~~and the electron transporting region; and~~

~~wherein the first layer, the second layer, and the light emitting layer comprise the hole~~
~~transporting material and the electron transporting material.~~

~~wherein the light emitting layer further comprises a dopant, and~~
~~wherein the dopant is a triplet light emitting material.~~

132. (Currently Amended) A light emitting device comprising:

an anode;

~~a cathode;~~

a hole transporting region over the comprising a hole transporting material adjacent to the
anode;

a light emitting region comprising a first layer over the hole transporting region, a second
layer over the first layer, and a light emitting layer sandwiched between the first layer and the
second layer;

an electron transporting region over the second layer, the electron transporting region
comprising an electron transporting material adjacent to the cathode; and

a cathode over the electron transporting region,

~~a light emitting region comprising a mixed layer of the hole transporting material and the~~
~~electron transporting material and having a capability of transporting both holes and electrons;~~
~~and~~

~~a dopant included only in a portion of the light emitting region;~~
~~wherein the light emitting region is formed between the hole transporting region and the~~
~~electron transporting region;~~

~~wherein the dopant is a triplet light emitting material, and~~

~~wherein the light emitting region includes a host to the dopant.~~

wherein the first layer, the second layer, and the light emitting layer comprise the hole transporting material and the electron transporting material,

wherein the light emitting layer further comprises a dopant, and

wherein the dopant is a triplet light emitting material.

133. (Currently Amended) A light emitting device comprising:

a first electrode;

~~a second electrode;~~

a hole transporting region comprising a hole transporting material adjacent to the first electrode;

a light emitting region comprising a first layer over the hole transporting region, a second layer over the first layer, and a light emitting layer sandwiched between the first layer and the second layer;

an electron transporting region over the second layer, the electron transporting region comprising an electron transporting material ~~adjacent to the second electrode; and~~

a second electrode over the electron transporting region.

~~a light emitting region comprising a mixed layer of the hole transporting material and the electron transporting material and having a capability of transporting both holes and electrons; and~~

~~a dopant included only in a central portion of the light emitting region;~~

~~wherein the light emitting region is formed between the hole transporting region and the electron transporting region.~~

wherein the first layer, the second layer, and the light emitting layer comprise the hole transporting material and the electron transporting material,

wherein the light emitting layer further comprises a dopant, and

wherein the second layer further comprises a blocking material.

134. (Currently Amended) A light emitting device comprising:

an anode;

~~a cathode;~~

a hole transporting region comprising a hole transporting material adjacent to the anode;
a light emitting region comprising a first layer over the hole transporting region, a second layer over the first layer, and a light emitting layer sandwiched between the first layer and the second layer;

an electron transporting region over the second layer, the electron transporting region comprising an electron transporting material adjacent to the cathode; and

a cathode over the electron transporting region,

~~a light emitting region comprising a mixed layer of the hole transporting material and the electron transporting material and having a capability of transporting both holes and electrons;~~
and

~~a dopant included in only a central portion of the light emitting region;~~

~~wherein the light emitting region is formed between the hole transporting region and the electron transporting region.~~

wherein the first layer, the second layer, and the light emitting layer comprise the hole transporting material and the electron transporting material,

wherein the light emitting layer further comprises a dopant, and

wherein the second layer further comprises a blocking material.

135. (Currently Amended) A light emitting device comprising:

~~an anode~~ a first electrode;

~~a cathode;~~

a hole transporting region comprising a hole transporting material adjacent to the anode
first electrode;

a light emitting region comprising a first layer over the hole transporting region, a second layer over the first layer, and a light emitting layer sandwiched between the first layer and the second layer;

an electron transporting region over the second layer, the electron transporting region comprising an electron transporting material adjacent to the cathode; and

~~a light emitting region comprising a mixed layer of the hole transporting material and the electron transporting material and having a capability of transporting both holes and electrons;~~
~~and~~

~~a dopant included in only a central portion of the light emitting region,~~
~~wherein the light emitting region is formed between the hole transporting region and the electron transporting region, and~~

a second electrode over the electron transporting region,
wherein the first layer, the second layer, and the light emitting layer comprise the hole transporting material and the electron transporting material,

wherein the light emitting layer further comprises a dopant,
wherein the second layer further comprises a blocking material, and
wherein the dopant is a triplet light emitting material.

136. (Currently Amended) A light emitting device comprising:

an anode;

a cathode;

a hole transporting region comprising a hole transporting material adjacent to the anode;

a light emitting region comprising a first layer over the hole transporting region, a second layer over the first layer, and a light emitting layer sandwiched between the first layer and the second layer;

an electron transporting region over the second layer, the electron transporting region comprising an electron transporting material adjacent to the cathode; and

a cathode over the electron transporting region,

~~a light emitting region comprising a mixed layer of the hole transporting material and the electron transporting material and having a capability of transporting both holes and electrons;~~
~~and~~

~~a dopant included in only a central portion of the light emitting region,~~
~~wherein the light emitting region is formed between the hole transporting region and the electron transporting region,~~

Applicant : Satoshi Seo et al.
Serial No. : 10/623,609
Filed : July 22, 2003
Page : 8 of 21

Attorney's Docket No.: 12732-
087002 / US5381/5474/5502D1

wherein the first layer, the second layer, and the light emitting layer comprise the hole transporting material and the electron transporting material,

wherein the light emitting layer further comprises a dopant,

wherein the second layer further comprises a blocking material, and

wherein the dopant is a triplet light emitting material[[, and]].

~~wherein the light emitting region includes a host to the dopant.~~

137. (Previously Presented) A light emitting device according to claim 129,
wherein at least one of the first electrode and the second electrode is light-transmissive.

138. (Previously Presented) A light emitting device according to claim 130,
wherein at least one of the anode and the cathode is light-transmissive.

139. (Previously Presented) A light emitting device according to claim 129,
wherein the light emitting region has a thickness of 30 nm or more.

140. (Currently Amended) A light emitting device according to claim 129,
wherein ~~a region including the dopant~~ the light emitting layer has a thickness of 10 to 20 nm, ~~and the region is apart from an interface between the light emitting region and the hole transporting region or the electron transporting region.~~

141. (Previously Presented) A light emitting device according to claim 129,
wherein the light emitting device is an electric apparatus selected from a display device, a video camera, a digital camera, an image reproducing device, a mobile portable computer, a personal computer, a cellular phone, and an audio.

142. (Previously Presented) A light emitting device according to claim 130,
wherein the light emitting region has a thickness of 30 nm or more.

143. (Currently Amended) A light emitting device according to claim 130,
wherein ~~a region including the dopant~~ the light emitting layer has a thickness of 10 to 20 nm, ~~and the region is apart from an interface between the light emitting region and the hole transporting region or the electron transporting region.~~

144. (Previously Presented) A light emitting device according to claim 130,
wherein the light emitting device is an electric apparatus selected from a display device, a video camera, a digital camera, an image reproducing device, a mobile portable computer, a personal computer, a cellular phone, and an audio.

145. (Currently Amended) A light emitting device according to claim 131,
wherein at least one of the ~~anode~~ first electrode and the ~~cathode~~ second electrode is light-transmissive.

146. (Previously Presented) A light emitting device according to claim 132,
wherein at least one of the anode and the cathode is light-transmissive.

147. (Previously Presented) A light emitting device according to claim 131,
wherein the light emitting region has a thickness of 30 nm or more.

148. (Currently Amended) A light emitting device according to claim 131,
wherein ~~a region including the dopant~~ the light emitting layer has a thickness of 10 to 20 nm, ~~and the region is apart from an interface between the light emitting region and the hole transporting region or the electron transporting region.~~

149. (Previously Presented) A light emitting device according to claim 131,
wherein the light emitting device is an electric apparatus selected from a display device, a video camera, a digital camera, an image reproducing device, a mobile portable computer, a personal computer, a cellular phone, and an audio.

150. (Previously Presented) A light emitting device according to claim 132,
wherein the light emitting region has a thickness of 30 nm or more.

151. (Currently Amended) A light emitting device according to claim 132,
wherein ~~a region including the dopant~~ the light emitting layer has a thickness of 10 to 20
nm, ~~and the region is apart from an interface between the light emitting region and the hole
transporting region or the electron transporting region.~~

152. (Previously Presented) A light emitting device according to claim 132,
wherein the light emitting device is an electric apparatus selected from a display device, a
video camera, a digital camera, an image reproducing device, a mobile portable computer, a
personal computer, a cellular phone, and an audio.

153. (Previously Presented) A light emitting device according to claim 133,
wherein at least one of the first electrode and the second electrode is light-transmissive.

154. (Previously Presented) A light emitting device according to claim 134,
wherein at least one of the anode and the cathode is light-transmissive.

155. (Previously Presented) A light emitting device according to claim 133,
wherein the light emitting region has a thickness of 30 nm or more.

156. (Currently Amended) A light emitting device according to claim 133,
wherein ~~a region including the dopant~~ the light emitting layer has a thickness of 10 to 20
nm, ~~and the region is apart from an interface between the light emitting region and the hole
transporting region or the electron transporting region.~~

157. (Previously Presented) A light emitting device according to claim 133,
wherein the light emitting device is an electric apparatus selected from a display device, a video camera, a digital camera, an image reproducing device, a mobile portable computer, a personal computer, a cellular phone, and an audio.

158. (Previously Presented) A light emitting device according to claim 134,
wherein the light emitting region has a thickness of 30 nm or more.

159. (Currently Amended) A light emitting device according to claim 134,
wherein ~~a region including the dopant~~ the light emitting layer has a thickness of 10 to 20 nm, ~~and the region is apart from an interface between the light emitting region and the hole transporting region or the electron transporting region.~~

160. (Previously Presented) A light emitting device according to claim 134,
wherein the light emitting device is an electric apparatus selected from a display device, a video camera, a digital camera, an image reproducing device, a mobile portable computer, a personal computer, a cellular phone, and an audio.

161. (Previously Presented) A light emitting device according to claim 135,
wherein at least one of the anode and the cathode is light-transmissive.

162. (Previously Presented) A light emitting device according to claim 136,
wherein at least one of the anode and the cathode is light-transmissive.

163. (Previously Presented) A light emitting device according to claim 135,
wherein the light emitting region has a thickness of 30 nm or more.

164. (Currently Amended) A light emitting device according to claim 135,
wherein ~~a region including the dopant~~ the light emitting layer has a thickness of 10 to 20 nm, ~~and the region is apart from an interface between the light emitting region and the hole transporting region or the electron transporting region.~~

165. (Previously Presented) A light emitting device according to claim 135,
wherein the light emitting device is an electric apparatus selected from a display device, a video camera, a digital camera, an image reproducing device, a mobile portable computer, a personal computer, a cellular phone, and an audio.

166. (Previously Presented) A light emitting device according to claim 136,
wherein the light emitting region has a thickness of 30 nm or more.

167. (Currently Amended) A light emitting device according to claim 136,
wherein ~~a region including the dopant~~ the light emitting layer has a thickness of 10 to 20 nm, ~~and the region is apart from an interface between the light emitting region and the hole transporting region or the electron transporting region.~~

168. (Previously Presented) A light emitting device according to claim 136,
wherein the light emitting device is an electric apparatus selected from a display device, a video camera, a digital camera, an image reproducing device, a mobile portable computer, a personal computer, a cellular phone, and an audio.

169. (Previously Presented) A light emitting device according to claim 129,
wherein the dopant comprises an organic compound.

170. (Previously Presented) A light emitting device according to claim 130,
wherein the dopant comprises an organic compound.

171. (Currently Amended) A light emitting device according to claim 131,
wherein the dopant comprises an organic compound or a complex having platinum or
iridium as a central metal.

172. (Currently Amended) A light emitting device according to claim 132,
wherein the dopant comprises an organic compound or a complex having platinum or
iridium as a central metal.

173. (Previously Presented) A light emitting device according to claim 133,
wherein the dopant comprises an organic compound.

174. (Previously Presented) A light emitting device according to claim 134,
wherein the dopant comprises an organic compound.

175. (Currently Amended) A light emitting device according to claim 135,
wherein the dopant comprises an organic compound or a complex having platinum or
iridium as a central metal.

176. (Currently Amended) A light emitting device according to claim 136,
wherein the dopant comprises an organic compound or a complex having platinum or
iridium as a central metal.

177. (Previously Presented) A light emitting device according to claim 169,
wherein the organic compound is at least one selected from the group of tris (2-
phenylpyridine) iridium, 2, 3, 7, 8, 12, 13, 17, 18-octaethyl-21H, 23H- porphyrin-platinum,
perylene, rubrene, and 4-(dicyanomethylene)-2-methyl-6-(p-dimethylaminostyryl)-4H-pyran.

Applicant : Satoshi Seo et al.
Serial No. : 10/623,609
Filed : July 22, 2003
Page : 14 of 21

Attorney's Docket No.: 12732-
087002 / US5381/5474/5502D1

178. (Previously Presented) A light emitting device according to claim 170,
wherein the organic compound is at least one selected from the group of tris (2-phenylpyridine) iridium, 2, 3, 7, 8, 12, 13, 17, 18-octaethyl-21H, 23H-porphyrin-platinum, perylene, rubrene, and 4-(dicyanomethylene)-2-methyl-6-(p-dimethylaminostyryl)-4H-pyran.

179. (Previously Presented) A light emitting device according to claim 171,
wherein the organic compound is at least one selected from the group of tris (2-phenylpyridine) iridium, 2, 3, 7, 8, 12, 13, 17, 18-octaethyl-21H, 23H-porphyrin-platinum, perylene, rubrene, and 4-(dicyanomethylene)-2-methyl-6-(p-dimethylaminostyryl)-4H-pyran.

180. (Previously Presented) A light emitting device according to claim 172,
wherein the organic compound is at least one selected from the group of tris (2-phenylpyridine) iridium, 2, 3, 7, 8, 12, 13, 17, 18-octaethyl-21H, 23H-porphyrin-platinum, perylene, rubrene, and 4-(dicyanomethylene)-2-methyl-6-(p-dimethylaminostyryl)-4H-pyran.

181. (Previously Presented) A light emitting device according to claim 173,
wherein the organic compound is at least one selected from the group of tris (2-phenylpyridine) iridium, 2, 3, 7, 8, 12, 13, 17, 18-octaethyl-21H, 23H-porphyrin-platinum, perylene, rubrene, and 4-(dicyanomethylene)-2-methyl-6-(p-dimethylaminostyryl)-4H-pyran.

182. (Previously Presented) A light emitting device according to claim 174,
wherein the organic compound is at least one selected from the group of tris (2-phenylpyridine) iridium, 2, 3, 7, 8, 12, 13, 17, 18-octaethyl-21H, 23H-porphyrin-platinum, perylene, rubrene, and 4-(dicyanomethylene)-2-methyl-6-(p-dimethylaminostyryl)-4H-pyran.

183. (Previously Presented) A light emitting device according to claim 175,
wherein the organic compound is at least one selected from the group of tris (2-phenylpyridine) iridium, 2, 3, 7, 8, 12, 13, 17, 18-octaethyl-21H, 23H-porphyrin-platinum, perylene, rubrene, and 4-(dicyanomethylene)-2-methyl-6-(p-dimethylaminostyryl)-4H-pyran.

Applicant : Satoshi Seo et al.
Serial No. : 10/623,609
Filed : July 22, 2003
Page : 15 of 21

Attorney's Docket No.: 12732-
087002 / US5381/5474/5502D1

184. (Previously Presented) A light emitting device according to claim 176,
wherein the organic compound is at least one selected from the group of tris (2-phenylpyridine) iridium, 2, 3, 7, 8, 12, 13, 17, 18-octaethyl-21H, 23H-porphyrin-platinum, perylene, rubrene, and 4-(dicyanomethylene)-2-methyl-6-(p-dimethylaminostyryl)-4H-pyran.

185. (Previously Presented) A light emitting device according to claim 129,
wherein the hole transporting material is at least one selected from the group of 4, 4'-bis [N-(3-methylphenyl)-N-phenyl-amino]-biphenyl, 4, 4'-bis [N-(1-naphthyl)-N-phenyl-amino]-biphenyl,

4, 4', 4''-tris (N, N-diphenyl-amino)-triphenylamine, and 4, 4', 4''-tris [N-(3-methylphenyl)-N-phenyl-amino]-triphenylamine.

186. (Previously Presented) A light emitting device according to claim 130,
wherein the hole transporting material is at least one selected from the group of 4, 4'-bis [N-(3-methylphenyl)-N-phenyl-amino]-biphenyl, 4, 4'-bis [N-(1-naphthyl)-N-phenyl-amino]-biphenyl,

4, 4', 4''-tris (N, N-diphenyl-amino)-triphenylamine, and 4, 4', 4''-tris [N-(3-methylphenyl)-N-phenyl-amino]-triphenylamine.

187. (Previously Presented) A light emitting device according to claim 131,
wherein the hole transporting material is at least one selected from the group of 4, 4'-bis [N-(3-methylphenyl)-N-phenyl-amino]-biphenyl, 4, 4'-bis [N-(1-naphthyl)-N-phenyl-amino]-biphenyl,

4, 4', 4''-tris (N, N-diphenyl-amino)-triphenylamine, and 4, 4', 4''-tris [N-(3-methylphenyl)-N-phenyl-amino]-triphenylamine.

188. (Previously Presented) A light emitting device according to claim 132,
wherein the hole transporting material is at least one selected from the group of 4, 4'-bis [N-(3-methylphenyl)-N-phenyl-amino]-biphenyl, 4, 4'-bis [N-(1-naphthyl)-N-phenyl-amino]-biphenyl,

4, 4', 4''-tris (N, N-diphenyl-amino)-triphenylamine, and 4, 4', 4''-tris [N-(3-methylphenyl)-N-phenyl-amino]-triphenylamine.

189. (Previously Presented) A light emitting device according to claim 133, wherein the hole transporting material is at least one selected from the group of 4, 4'-bis [N-(3-methylphenyl)-N-phenyl-amino]-biphenyl, 4, 4'-bis [N-(1-naphthyl)-N-phenyl-amino]-biphenyl,

4, 4', 4''-tris (N, N-diphenyl-amino)-triphenylamine, and 4, 4', 4''-tris [N-(3-methylphenyl)-N-phenyl-amino]-triphenylamine.

190. (Previously Presented) A light emitting device according to claim 134, wherein the hole transporting material is at least one selected from the group of 4, 4'-bis [N-(3-methylphenyl)-N-phenyl-amino]-biphenyl, 4, 4'-bis [N-(1-naphthyl)-N-phenyl-amino]-biphenyl,

4, 4', 4''-tris (N, N-diphenyl-amino)-triphenylamine, and 4, 4', 4''-tris [N-(3-methylphenyl)-N-phenyl-amino]-triphenylamine.

191. (Previously Presented) A light emitting device according to claim 135, wherein the hole transporting material is at least one selected from the group of 4, 4'-bis [N-(3-methylphenyl)-N-phenyl-amino]-biphenyl, 4, 4'-bis [N-(1-naphthyl)-N-phenyl-amino]-biphenyl,

4, 4', 4''-tris (N, N-diphenyl-amino)-triphenylamine, and 4, 4', 4''-tris [N-(3-methylphenyl)-N-phenyl-amino]-triphenylamine.

192. (Previously Presented) A light emitting device according to claim 136, wherein the hole transporting material is at least one selected from the group of 4, 4'-bis [N-(3-methylphenyl)-N-phenyl-amino]-biphenyl, 4, 4'-bis [N-(1-naphthyl)-N-phenyl-amino]-biphenyl,

4, 4', 4''-tris (N, N-diphenyl-amino)-triphenylamine, and 4, 4', 4''-tris [N-(3-methylphenyl)-N-phenyl-amino]-triphenylamine.

193. (Previously Presented) A light emitting device according to claim 129,
wherein the electron transporting material is at least one selected from the group of tris (8-quinolinolato) aluminium, tris (4-methyl-8-quinolinolato) aluminium, bis (10-hydroxybenzo[h]-quinolinato) beryllium, bis (2-methyl-8-quinolinolato)-(4-phenylphenolate)-aluminium, bis [2-(2-hydroxyphenyl)-benzoxazolato] zinc, bis [2-(2-hydroxyphenyl)-benzothiazolato] zinc, 2-(4-biphenyl)-5-(4-tert-butylphenyl)-1, 3, 4-oxadiazole, 1, 3-bis[5-(p-tert-butylphenyl)-1, 3, 4-oxadiazole-2-il] benzene, 5-(4-biphenyl)-3-(4-tert-butylphenyl)-4-phenyl-1, 2, 4-triazole, 5-(4-biphenyl)-3-(4-tert-butylphenyl)-4-(4-ethylphenyl)-1, 2, 4-triazole, bathophenanthroline, and bathocuproine.

194. (Previously Presented) A light emitting device according to claim 130,
wherein the electron transporting material is at least one selected from the group of tris (8-quinolinolato) aluminium, tris (4-methyl-8-quinolinolato) aluminium, bis (10-hydroxybenzo[h]-quinolinato) beryllium, bis (2-methyl-8-quinolinolato)-(4-phenylphenolate)-aluminium, bis [2-(2-hydroxyphenyl)-benzoxazolato] zinc, bis [2-(2-hydroxyphenyl)-benzothiazolato] zinc, 2-(4-biphenyl)-5-(4-tert-butylphenyl)-1, 3, 4-oxadiazole, 1, 3-bis[5-(p-tert-butylphenyl)-1, 3, 4-oxadiazole-2-il] benzene, 5-(4-biphenyl)-3-(4-tert-butylphenyl)-4-phenyl-1, 2, 4-triazole, 5-(4-biphenyl)-3-(4-tert-butylphenyl)-4-(4-ethylphenyl)-1, 2, 4-triazole, bathophenanthroline, and bathocuproine.

195. (Previously Presented) A light emitting device according to claim 131,
wherein the electron transporting material is at least one selected from the group of tris (8-quinolinolato) aluminium, tris (4-methyl-8-quinolinolato) aluminium, bis (10-hydroxybenzo[h]-quinolinato) beryllium, bis (2-methyl-8-quinolinolato)-(4-phenylphenolate)-aluminium, bis [2-(2-hydroxyphenyl)-benzoxazolato] zinc, bis [2-(2-hydroxyphenyl)-benzothiazolato] zinc, 2-(4-biphenyl)-5-(4-tert-butylphenyl)-1, 3, 4-oxadiazole, 1, 3-bis[5-(p-tert-butylphenyl)-1, 3, 4-oxadiazole-2-il] benzene, 5-(4-biphenyl)-3-(4-tert-butylphenyl)-4-phenyl-1, 2, 4-triazole, 5-(4-biphenyl)-3-(4-tert-butylphenyl)-4-(4-ethylphenyl)-1, 2, 4-triazole, bathophenanthroline, and bathocuproine.

196. (Previously Presented) A light emitting device according to claim 132, wherein the electron transporting material is at least one selected from the group of tris (8-quinolinolato) aluminium, tris (4-methyl-8-quinolinolato) aluminium, bis (10-hydroxybenzo[h]-quinolinato) beryllium, bis (2-methyl-8-quinolinolato)-(4-phenylphenolate)-aluminium, bis [2-(2-hydroxyphenyl)-benzoxazolato] zinc, bis [2-(2-hydroxyphenyl)-benzothiazolato] zinc, 2-(4-biphenyl)-5-(4-tert-butylphenyl)-1, 3, 4-oxadiazole, 1, 3-bis[5-(p-tert-butylphenyl)-1, 3, 4-oxadiazole-2-yl] benzene, 5-(4-biphenyl)-3-(4-tert-butylphenyl)-4-phenyl-1, 2, 4-triazole, 5-(4-biphenyl)-3-(4-tert-butylphenyl)-4-(4-ethylphenyl-1, 2, 4-triazole, bathophenanthroline, and bathocuproine.

197. (Previously Presented) A light emitting device according to claim 133, wherein the electron transporting material is at least one selected from the group of tris (8-quinolinolato) aluminium, tris (4-methyl-8-quinolinolato) aluminium, bis (10-hydroxybenzo[h]-quinolinato) beryllium, bis (2-methyl-8-quinolinolato)-(4-phenylphenolate)-aluminium, bis [2-(2-hydroxyphenyl)-benzoxazolato] zinc, bis [2-(2-hydroxyphenyl)-benzothiazolato] zinc, 2-(4-biphenyl)-5-(4-tert-butylphenyl)-1, 3, 4-oxadiazole, 1, 3-bis[5-(p-tert-butylphenyl)-1, 3, 4-oxadiazole-2-yl] benzene, 5-(4-biphenyl)-3-(4-tert-butylphenyl)-4-phenyl-1, 2, 4-triazole, 5-(4-biphenyl)-3-(4-tert-butylphenyl)-4-(4-ethylphenyl-1, 2, 4-triazole, bathophenanthroline, and bathocuproine.

198. (Previously Presented) A light emitting device according to claim 134, wherein the electron transporting material is at least one selected from the group of tris (8-quinolinolato) aluminium, tris (4-methyl-8-quinolinolato) aluminium, bis (10-hydroxybenzo[h]-quinolinato) beryllium, bis (2-methyl-8-quinolinolato)-(4-phenylphenolate)-aluminium, bis [2-(2-hydroxyphenyl)-benzoxazolato] zinc, bis [2-(2-hydroxyphenyl)-benzothiazolato] zinc, 2-(4-biphenyl)-5-(4-tert-butylphenyl)-1, 3, 4-oxadiazole, 1, 3-bis[5-(p-tert-butylphenyl)-1, 3, 4-oxadiazole-2-yl] benzene, 5-(4-biphenyl)-3-(4-tert-butylphenyl)-4-phenyl-1, 2, 4-triazole, 5-(4-biphenyl)-3-(4-tert-butylphenyl)-4-(4-ethylphenyl-1, 2, 4-triazole, bathophenanthroline, and bathocuproine.

199. (Previously Presented) A light emitting device according to claim 135,
wherein the electron transporting material is at least one selected from the group of tris
(8-quinolinolato) aluminium, tris (4-methyl-8-quinolinolato) aluminium, bis (10-
hydroxybenzo[h]-quinolinato) beryllium, bis (2-methyl-8-quinolinolato)-(4-phenylphenolate)-
aluminium, bis [2-(2-hydroxyphenyl)-benzoxazolato] zinc, bis [2-(2-hydroxyphenyl)-
benzothiazolato] zinc, 2-(4-biphenyl)-5-(4-tert-butylphenyl)-1, 3, 4-oxadiazole, 1, 3-bis[5-(p-
tert-butylphenyl)-1, 3, 4-oxadiazole-2-yl] benzene, 5-(4-biphenyl)-3-(4-tert-butylphenyl)-4-
phenyl-1, 2, 4-triazole, 5-(4-biphenyl)-3-(4-tert-butylphenyl)-4-(4-ethylphenyl)-1, 2, 4-triazole,
bathophenanthroline, and bathocuproine.

200. (Previously Presented) A light emitting device according to claim 136,
wherein the electron transporting material is at least one selected from the group of tris
(8-quinolinolato) aluminium, tris (4-methyl-8-quinolinolato) aluminium, bis (10-
hydroxybenzo[h]-quinolinato) beryllium, bis (2-methyl-8-quinolinolato)-(4-phenylphenolate)-
aluminium, bis [2-(2-hydroxyphenyl)-benzoxazolato] zinc, bis [2-(2-hydroxyphenyl)-
benzothiazolato] zinc, 2-(4-biphenyl)-5-(4-tert-butylphenyl)-1, 3, 4-oxadiazole, 1, 3-bis[5-(p-
tert-butylphenyl)-1, 3, 4-oxadiazole-2-yl] benzene, 5-(4-biphenyl)-3-(4-tert-butylphenyl)-4-
phenyl-1, 2, 4-triazole, 5-(4-biphenyl)-3-(4-tert-butylphenyl)-4-(4-ethylphenyl)-1, 2, 4-triazole,
bathophenanthroline, and bathocuproine.